WHAT IS CLAIMED IS:

1. For use in a mobile ad hoc network formed by a plurality of mobile ad hoc network (MANET) nodes, a first MANET node capable of aggregating route cost information associated with a first route from a source MANET node to a destination MANET node, said first MANET node comprising:

a radio frequency (RF) transceiver capable of wirelessly communicating with other ones of said plurality of MANET nodes; and

a controller capable of receiving incoming data packets from said RF transceiver and sending outgoing data packets to said RF transceiver, wherein said controller receives a Route Request (RREQ) message generated by said source MANET node and retrieves initial route cost information from said RREQ message, said initial route cost information comprising at least one of:

at least one radio frequency (RF) link cost parameter of at least one preceding RF link between said first MANET node and said source MANET node in said first route; and

at least one node cost parameter of at least one preceding MANET node between said first MANET node and said source MANET node in said first route.

2. The first MANET node as set forth in Claim 1 wherein said at least one RF link cost parameter is a zero value and said at least one node cost parameter is a zero value if said first MANET node receives said RREQ message directly from said source MANET node.

3. The first MANET node as set forth in Claim 2 wherein said controller stores said initial route cost information retrieved from said RREQ message in a route table associated with said first MANET node.

4. The first MANET node as set forth in Claim 3 wherein said controller updates said initial route cost information in said RREQ message by adding to said initial route cost information at least one of:

an RF link cost parameter associated with an RF link to an immediately preceding MANET node between said first MANET node and said source MANET node in said first route; and

a first node cost parameter associated with said first MANET node.

5. The first MANET node as set forth in Claim 4 wherein said controller forwards said RREQ message containing said updated route cost information to a next MANET node between said first MANET node and said destination MANET node in said first route.

6. The first MANET node as set forth in Claim 5 wherein said controller further receives a Route Reply (RREP) message generated by said destination MANET node and retrieves initial route cost information from said RREP message, said initial route cost information comprising at least one of:

at least one RF link cost parameter of at least one preceding RF link between said first MANET node and said destination MANET node in said first route; and

at least one node cost parameter of at least one preceding MANET node between said first MANET node and said destination MANET node in said first route.

7. The first MANET node as set forth in Claim 6 wherein said at least one RF link cost parameter in said RREP message is a zero value and said at least one node cost parameter in said RREP message is a zero value if said first MANET node receives said RREP message directly from said destination MANET node.

8. The first MANET node as set forth in Claim 7 wherein said controller stores said initial route cost information retrieved from said RREP message in said route table.

9. The first MANET node as set forth in Claim 8 wherein said controller updates said initial route cost information in said RREP message by adding to said initial route cost information at least one of:

an RF link cost parameter associated with an RF link to an immediately preceding MANET node between said first MANET node and said destination MANET node in said first route; and

a first node cost parameter associated with said first MANET node.

10. The first MANET node as set forth in Claim 9 wherein said controller forwards said RREP message containing said updated route cost information to a next MANET node between said first MANET node and said source MANET node in said first route.

11. For use in a mobile ad hoc network formed by a plurality of mobile ad hoc network (MANET) nodes, a method of aggregating in a first MANET node route cost information associated with a first route from a source MANET node to a destination MANET node, the method comprising the steps of:

wirelessly communicating with other ones of the plurality of MANET nodes; and

receiving in the first MANET node a Route Request (RREQ) message generated by the source MANET node;

retrieving initial route cost information from the RREQ message, the initial route cost information comprising at least one of:

at least one radio frequency (RF) link cost parameter of at least one preceding RF link between the first MANET node and the source MANET node in the first route; and

at least one node cost parameter of at least one preceding MANET node between the first MANET node and the source MANET node in the first route.

12. The method as set forth in Claim 11 wherein the at least one RF link cost parameter is a zero value and the at least one node cost parameter is a zero value if the first MANET node receives the RREQ message directly from the source MANET node.

13. The method as set forth in Claim 12 further comprising the step of storing the initial route cost information retrieved from the RREQ message in a route table associated with the first MANET node.

14. The method as set forth in Claim 13 further comprising the step of updating the initial route cost information in the RREQ message by adding to the initial route cost information at least one of:

an RF link cost parameter associated with an RF link to an immediately preceding MANET node between the first MANET node and the source MANET node in the first route; and

a first node cost parameter associated with the first MANET node.

15. The method as set forth in Claim 14 further comprising the step of forward the RREQ message containing the updated route ingcost information to a next MANET node between the first MANET node and the destination MANET node in the first route.

16. The method as set forth in Claim 15 further comprising the steps of:

receiving in the first MANET node a Route Reply (RREP) message generated by the destination MANET node; and

retrieving initial route cost information from the RREP message, the initial route cost information comprising at least one of:

at least one RF link cost parameter of at least one preceding RF link between the first MANET node and the destination MANET node in the first route; and

at least one node cost parameter of at least one preceding MANET node between the first MANET node and the destination MANET node in the first route.

17. The method as set forth in Claim 16 wherein the at least one RF link cost parameter in the RREP message is a zero value and the at least one node cost parameter in the RREP message is a zero value if the first MANET node receives the RREP message directly from the destination MANET node.

18. The method as set forth in Claim 17 further comprising the step of storing the initial route cost information retrieved from the RREP message in the route table.

19. The method as set forth in Claim 18 further comprising the step of updating the initial route cost information in the RREP message by adding to the initial route cost information at least one of:

an RF link cost parameter associated with an RF link to an immediately preceding MANET node between the first MANET node and the destination MANET node in the first route; and

a first node cost parameter associated with the first MANET node.

20. The method as set forth in Claim 19 further comprising the step of forwarding the RREP message containing the updated route cost information to a next MANET node between the first MANET node and the source MANET node in the first route.